

AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
Meeting 12-01 April 24, 2012
HISTORY RECORD

FAA Control # 12-01-299

Subject: Loss of CAT D Line of Minima in Support of Circle-to-Land Operations.

Background/Discussion: CAT D minimums are not published on many instrument approach procedures. NBAA furnishes the following IAP specimens: Hutchison KS – HUT, Mena AR – MEZ, Moberly MO – MYB. The failure to publish a CAT D line of minima results in the loss of access to these airports by operators of many turbine-powered business aircraft in the event that a circle-to-land approach is required. The vast majority of these aircraft fall within the CAT C approach category as defined in 14 CFR part 97; however, the maneuvering speed required during the execution of the circle-to-landing maneuver often requires using next higher approach category (CAT D). Without this line of minima, access to the airport is effectively denied if a straight-in approach is not available.

For example, at Moberly, MO there are two RNAV (GPS) approaches serving the primary 5000x100 runway. If these approaches are not available (e.g. loss of RAIM, out-of-date nav-database, GPS equipment failure, etc.), the only alternative approach available is the VOR/DME-A. However, this approach does not have a CAT D line of minima published. At Mena, AR if the ILS approach to runway 27 is not be available, the longest runway at this airport (6000x100) is also not available for landing since circle-to-landing is required out of the other available approaches. All the Mena AR approaches do not include a CAT D line of minima. While the increasing availability of straight-in RNAV (GPS) approaches has reduced the likelihood of a circling approach, it has not entirely eliminated that possibility. If a circle-to-land approach is required, a large segment of business aircraft operators are effectively denied access that they would otherwise enjoy if a straight-in approach were available.

NBAA believes that one reason that the CAT D line of minima is not published at many of these airports may be due to the runway's designated Airport Reference Code (ARC), a designation used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport (ref: AC 150/5300-13, Airport Design). A runway's designated ARC is defined in part by the design aircraft's approach category (e.g. C-IV, B-II). In the past, the runway's design ARC was used as a justification for not publishing lines of minima above the runway's design ARC.

In 2000, AFS-420 issued a Policy Memorandum (TIL00-015 - attached) that stated in part:

"The ARC system contained in AC 150/5300-13, Airport Design, does not provide adequate guidance to determine which aircraft minima categories to publish. Instrument procedure aircraft categories are based on approach speed, and do not reflect airport infrastructure requirements or limitations."

TIL00-15 has since been incorporated into FAA Order 8260.3 TERPS in paragraph 3.1.1a:

*Note: Do not base the decision to restrict straight-in minima to specific approach categories solely on the Airport Reference Code (ARC) designation of the runway. The ARC system described in Advisory Circular (AC) 150/5300-13, Airport Design, is primarily intended to establish runway infrastructure requirements. **The ARC designation is not meant to determine the set of approach categories to publish in a procedure landing minima.** This decision is made on a case-by-case basis through Regional Airspace and Procedures Team*

*(RAPT) coordination or by appropriate DoD authority, **and must accommodate the approach speed of all aircraft expected to utilize the procedure.** ARC code/supporting infrastructure should be considered when determining authorized approach categories when the RAPT determines it is appropriate for safe operations.*

When a runway carries a “C” ARC designation, it is capable to supporting CAT C aircraft operations. However, there are times when these aircraft must maneuver at a higher airspeed that will result in the need to use the CAT D line of minima. The removal of CAT D minimum solely on the basis of a runway’s ARC “C” designation unduly restricts access to these CAT C aircraft when circle-to-landing is necessary.

Recommendations:

To clearly communicate to the RAPT and other parties involved in procedure development, NBAA recommends that the “Note” in TERPS paragraph 3.1.1a be expanded to include the following statement:

*Note: Do not base the decision to restrict straight-in minima to specific approach categories solely on the Airport Reference Code (ARC) designation of the runway. The ARC system described in Advisory Circular (AC) 150/5300-13, Airport Design, is primarily intended to establish runway infrastructure requirements. The ARC designation is not meant to determine the set of approach categories to publish in a procedure landing minima. This decision is made on a case-by-case basis through Regional Airspace and Procedures Team (RAPT) coordination or by appropriate DoD authority, and must accommodate the approach speed of all aircraft expected to utilize the procedure. ARC code/supporting infrastructure should be considered when determining authorized approach categories when the RAPT determines it is appropriate for safe operations. **In addition, the requirement for an aircraft to maneuver at a higher speed during circle-to-land operations must be considered. For approaches where straight-in CAT C line of minima is published and circling is authorized, this requirement normally necessitates publishing a CAT D line of minima to support circling by CAT C aircraft. Any infrastructure restrictions regarding aircraft operations should be communicated to the pilot/operator in the Airport/Facility Directory.***

Comments: This recommendation affects FAA Order 8260.3, US Standard for Terminal Instrument Procedures (TERPS).

Submitted by: Richard J. Boll II

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Date: 13 March 2012

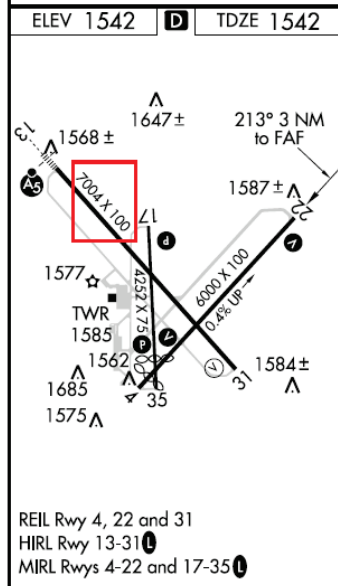
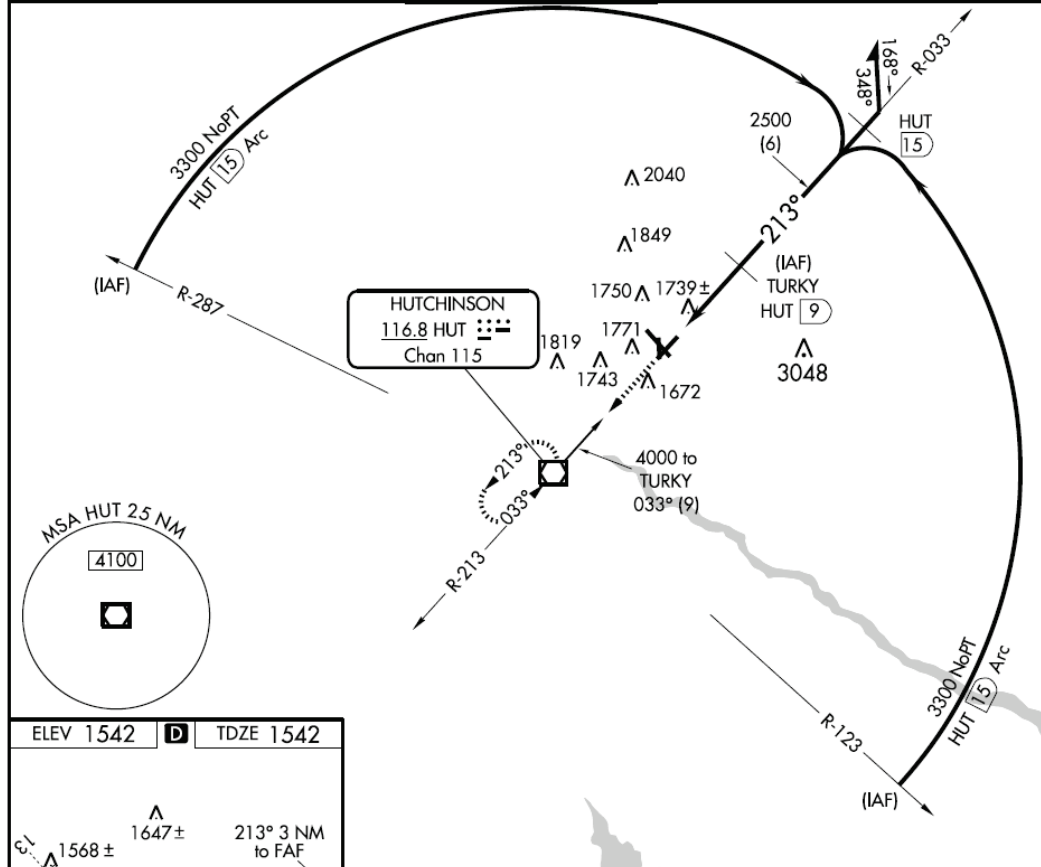
HUTCHINSON, KANSAS



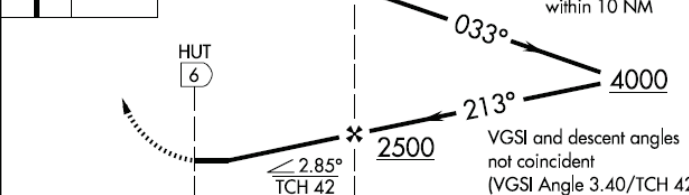
AL-200 (FAA)

VOR/DME HUT 116.8 Chan 115	APP CRS 213°	Rwy Idg TDZE Apt Elev	6000 1542 1542
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VOR/DME RWY 22 HUTCHINSON MUNI (HUT)

<div> <div> </div> <div> MISSED APPROACH: Climb to 3000 direct HUT VOR/DME and hold. </div> </div>				
ATIS 124.25	WICHITA APP CON 125.5 306.2	HUTCHINSON TOWER ★ 118.5 (CTAF) 363.0	GND CON 121.9	UNICOM 122.95



3000	HUT				
					
					
CATEGORY	A	B	C	D	
S-22	2000-1	458 (500-1)	2000-1¼ 458 (500-1¼)	NA	
CIRCLING	2080-1	538 (600-1)	2080-1½ 538 (600-1½)	NA	

HUTCHINSON, KANSAS
Amdt 6A 12040

38°04'N-97°52'W

HUTCHINSON MUNI (HUT) VOR/DME RWY 22

NC-2, 09 FEB 2012 to 08 MAR 2012

NC-2, 09 FEB 2012 to 08 MAR 2012

MENA, ARKANSAS

AL-6002 (FAA)

VORTAC PGO	APP CRS	Rwy Idg	N/A
113.5	108°	TDZE	N/A
Chan 82		Apt Elev	1079

VOR/DME-A MENA INTERMOUNTAIN MUNI (MEZ)

T If local altimeter setting not received, use Fort Smith altimeter setting and increase all MDA's 200 ft.

MISSED APPROACH: Climb to 3000 via PGO R-108 then climbing left turn to 4100 via PGO R-108 to ERUNE and hold.

AWOS-3
118.025

MEMPHIS CENTER
126.1 269.0

UNICOM
122.8 (CTAF)

IAF
RICH MOUNTAIN
113.5 PGO
Chan **82**

4100 NoPT
108°
(10)

108°
1 min
288°
10 NM

(IAF)
ERUNE
PGO **10**

3600
108°
(5)

BITSE
PGO **15**

1600
1544
1619
1670
1999±
1932

IMODE
PGO **21.2**

R-108

2362

MSA PGO 25 NM

4000



One Minute
Holding Pattern

ERUNE
PGO **10**

BITSE
PGO **15**

3000

4100

ERUNE
PGO **10**

PGO R-108

PGO R-108

IMODE
PGO **21.2**

4100

288°

108°

108°

3600

5 NM

6.2 NM

CATEGORY

A

B

C

D

CIRCLING

2260-1¼
1181 (1200-1¼)

2260-1½
1181 (1200-1½)

2260-3
1181 (1200-3)

NA

ELEV 1079

108° 8.2 NM
from FAF

0.8% UP
5000 X 75
6001 X 100
0.5% UP

MIRL Rwy 9-27 and 17-35

REIL Rwy 9, 27 and 35

MENA, ARKANSAS

Amdt 10 11069

34°33'N - 94°12'W

MENA INTERMOUNTAIN MUNI (MEZ)

VOR/DME-A

SC-1, 09 FEB 2012 to 08 MAR 2012

SC-1, 09 FEB 2012 to 08 MAR 2012

MOBERLY, MISSOURI

AL-5976 (FAA)

11349

VOR/DME MCM 112.9 Chan 76	APP CRS 161°	Rwy Idg TDZE Apt Elev N/A N/A 867
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VOR/DME-A
MOBERLY/OMAR N. BRADLEY (MBY)

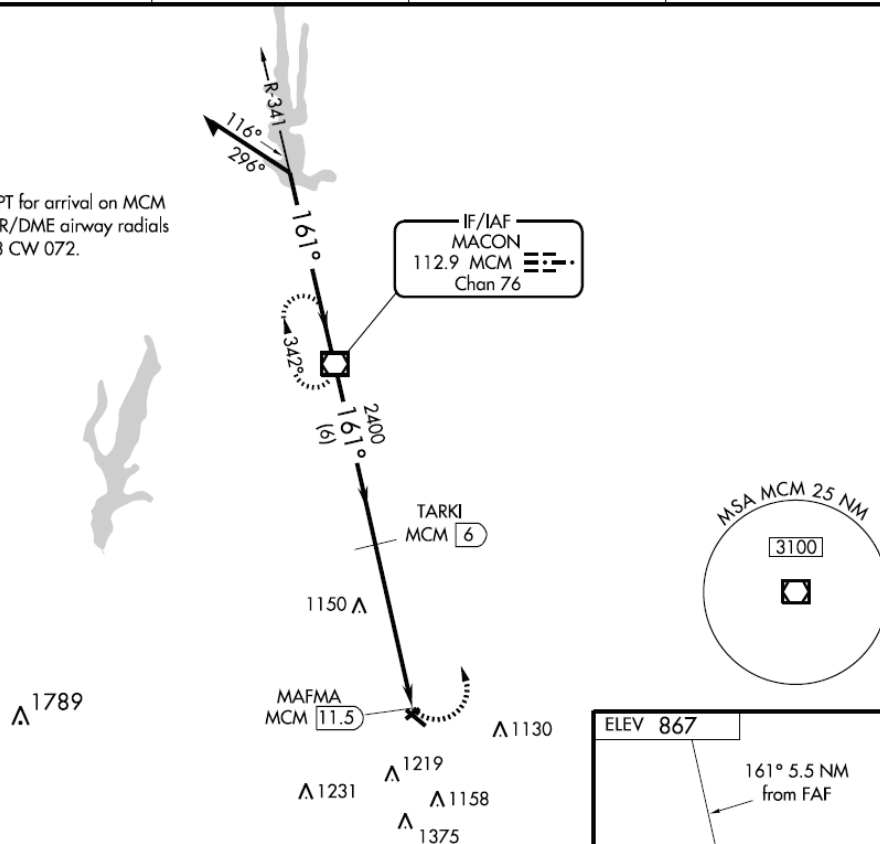


Circling to Rwy 5 NA at night. When local altimeter setting not received, use Columbia altimeter setting and increase all MDA 100 feet and visibility Cat C ¼ mile. Visibility reduction by helicopters NA.

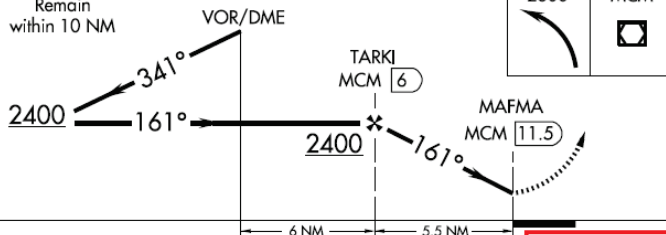
MISSED APPROACH: Climbing left turn to 2600 direct MCM VOR/DME and hold.

AWOS-3 120.025	KANSAS CITY CENTER 125.25 235.975	COLUMBIA RADIO 122.1R	UNICOM 122.7 (CTAF) 0
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NoPT for arrival on MCM VOR/DME airway radials 253 CW 072.



Remain within 10 NM



CATEGORY	A	B	C	D
CIRCLING	1420-1	553 (600-1)	1480-1¾ 613 (700-1¾)	NA

REIL Rwy 13 and 31
MIRL Rwy 5-23 and 13-31

MOBERLY, MISSOURI
Amdt 4 30JUN11

39°28'N-92°26'W

MOBERLY/OMAR N. BRADLEY (MBY)
VOR/DME-A

NC-3, 09 FEB 2012 to 08 MAR 2012

NC-3, 09 FEB 2012 to 08 MAR 2012

INITIAL DISCUSSION - MEETING 12-01: New issue presented by Rich Boll on behalf of NBAA. The lack of CAT D minimums on many IAPs results in the loss of access to some airports by operators of turbine-powered business aircraft in the event that a circle-to-land approach is required. The vast majority of these aircraft fall within the CAT C approach category; however, the maneuvering speed required during the execution of a circling maneuver often requires using next higher approach category. Without CAT D minima, access to the airport is effectively denied if a straight-in approach is not available. Rich stated that NBAA believes that one reason that the CAT D line of minima is not published at many of these airports may be due to the runway's designated Airport Reference Code (ARC), a designation used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at the airport (ref: AC 150/5300-13, Airport Design). A runway's designated ARC is defined in part by the design aircraft's approach category (e.g. C-IV, B-II). In the past, the runway's design ARC was used as a justification for not publishing lines of minima above the runway's design ARC. The NBAA recommendation is that the Note in TERPS paragraph 3.1.1a be expanded to include a requirement that whenever CAT C circling minimums are authorized at an airport, CAT D circling minima must also be published. Brad Rush, AJV-3B, asked if it would be appropriate to only publish CAT D circling minima on an approach that had CAT A-C straight-in minimums. Tom Schneider, AFS-420, said that there is nothing to preclude this. Roy Maxwell, Delta, stated that this is a problem for airlines also, especially charters operating into smaller airports. All CAT C aircraft use CAT D minimums. Roy added that the ARC was never intended to specify aircraft category for an airport. Normal growth will normally increase aircraft movements, which would, in turn, increase runway design to handle higher category aircraft. It was noted during the discussion that if CAT D minima was published, the possibility exists that a CAT D aircraft could use the approach and may land at an airport not suitable for the aircraft. Tom Schneider, AFS-420, stated that there had been some initial discussion of developing a "C+" line of circling minima. This would indicate that a CAT D circling evaluation had been made, but the approach was restricted to CAT C aircraft use; however, this would require a possible rule change and associated legal action. Mark Steinbicker, AFS-470, stated that this issue needs further internal AFS-400 discussion. Rick Dunham, AFS-420, added that there also needs to be further discussion with other lines of business that may be involved; e.g., Airports. Tom closed by stating that the issue will impact TERPS criteria; therefore, must go through the US-IFPP. Tom took the IOU to notify the US-IFPP. **ACTION: AFS-420 and US IFPP.**

MEETING 12-02: Tom Schneider, AFS-420, stated that the issue was briefed to the US-IFPP on 5 September 2012. AFS-420 accepted an action to analyze the issue and to consider the recommendation to expand guidance related to the publication of circling minimums within order 8260.3B. John Bordy, AFS-420, is forming a study group to address the issue and develop a recommendation that will be presented to the US-IFPP at their next meeting (January 24, 2013). Tom briefed that John will accept outside input. The following personnel signed up as participants:

John Bordy	AFS-420 (Chair)	405-954-0980	john.bordy@faa.gov
Rich Boll	NBAA	316-655-8856	richard.boll@sbcglobal.net
Dan Lehman	NAVFIG	843-218-5282	dan.lehman@navy.mil
Steve Serur	ALPA	703-689-4333	steve.serur@alpa.org
Mark Cato	ALPA	703-689-4189	mark.cato@alpa.org

ACTION: AFS-420 and US IFPP.

MEETING 13-01: Tom Schneider, AFS-420, briefed that the first US-IFPP workgroup meeting, led by John Bordy, the AFS-420 conventional TERPS criteria specialist, was held on 17 April. The following synopsis was provided by John: "A work group formed under the US-IFPP met via teleconference on 17 April, 2013, to discuss the issue. The group consisted of representatives from AFS-410, AFS-420, AJV-3, ATO-T, NBAA, and ALPA. Criteria were identified that could be amended to prevent the exclusion of minimums based solely on a runway's design code. AFS-420 has taken an action to coordinate the issue further with AAS-100 (OPR for AC 150/5300-13A) and AFS-460 (OPR for Order 8260.43) prior to convening the next meeting of the work group in early May. A final recommendation to address the ACF agenda item will be presented to the US-IFPP plenary group in June and the results briefed at the next ACF. **ACTION: AFS-420 and US IFPP.**"


MEETING 13-02: Tom Schneider, AFS-420, briefed the following update as provided by John Bordy, the AFS-420 conventional TERPS criteria specialist: "Within Order 8260.3, Volume 1, Chapter 3, Paragraph 3.1.1.a, the last sentence of the note that reads, "ARC codes/supporting infrastructure should not be considered when determining authorized approach categories when the RAPT determines it is appropriate for safe operations." has been removed from the draft Change 26 to the order. It's expected the final revisions to Change 26 will be completed and entered into final coordination by the end of November. Although this change is expected to provide minor relief to this issue, it may not address it completely. AFS-420 intends to convene an additional meeting of the working group prior to the next meeting of the US-IFPP to determine whether/what additional actions are warranted."

Rich Boll, NBAA, says it appears we took out a sentence providing guidance from 2000, and questioned what is going to take its place. Tom advised that this will go to working group, of which Rich is a participant. Bob Lamond, NBAA, discussed that taking this out is fine, but this appears to be a half-step approach to a solution, and should we instead go to a more direct solution. Group discussion ensued. Rich asked about linking to a policy memorandum. Tom said we try to avoid those as much as possible, and we will bring the ACF-IPG input back to John Bordy and the working group. Rich requested the target date for publication of Order 8260.3C, since any change will now have to wait until then. Tom responded "August 2015". Rich said NBAA would prefer to see something sooner and recommended the policy be included in TERPS Change 26. Tom agreed to forward the request to John Bordy. **ACTION: AFS-420 and US IFPP.**


MEETING 14-01: Tom Schneider, AFS-420, briefed a slide provided by John Bordy, AFS-420, (P) on Change 26 to FAA Order 8260.3B (TERPS), which was published in Feb and clarified the language related to the publication of approach minima. Bob Lamond, NBAA, feels the situation is getting worse, not better, with the "poster child" example of West Point, VA, LOC RWY 10. NBAA asked for Cat C minimums to be added to existing and proposed new procedures. NBAA was told "no" with seven reasons. (Bob requested this be entered into record). (P) None of the seven reasons pertained to approach categories. NBAA says correct, rational application of policy was not being applied in the decision process for designed Cat C operations, and requesting expedited help to resolve the problem. Currently, pilots can do Cat C on circling approaches at this location. NBAA is fighting these situations one at a time, which has proven extremely time consuming. Bruce McGray, AFS-410, agreed that there are too many disconnected efforts without proper coordination. Bob said there is a TERPs instruction letter from Sept 2000 they would like reissued with guidance to the three service areas and FPTs. Tom explained that two separate FAA policies exist: AFS has established policy addressing construction of procedures for Cat A-E aircraft; Airports has established policy regarding


design standards to support various types of aircraft. Bob believes the ATO is incorrectly using ATO standards and has effectively built a brick wall between the two. NBAA is not looking for policy changes to criteria or standards, but is looking at the correct application of existing standards. He believes AOV should look at this. Gary Fiske, AJV-8, stated to be careful, since AOV is an Air traffic safety organization. Tom said Service Areas are part of the ATO, and AOV provides oversight in their areas. Rick Dunham, AFS-420, said there appears to be a disconnect and that AFS-420 will look at it. Bob said the issue is to correctly apply existing standards, which was clearly not done in the example he provided.

Status: AFS-420 will continue leading the workgroup to develop a recommended position at the US-IFPP. **Item Open (AFS-420).**

MEETING 14-02: Tom Schneider, AFS-420, briefed on slides () provided by John Bordy, AFS-420. He then asked Rich Boll, NBAA, to elaborate on the issue. Rich briefed that there are a large number of airports in the NAS that do not have, or will soon be losing CAT C & D minima on the basis of airport design code/runway reference code. Rich provided an example of an airport in Iowa losing its CAT C line of minima because the runway was designated to a class BII category. Tom said that in the majority of these cases, when procedures are being designed, the RAPT, in conjunction with the airport regional authority, decide on categories to publish. Rich mentioned the stronger language added to FAA Order 8260.3B, change 26, to support circle to land operations has helped. Rick Dunham, AFS-420, said there is also additional guidance for the RAPT on CAT C & D in an official memo that should come out soon. Tom advised if additional information becomes available prior to publishing the ACF minutes, it will be attached.

Status: AFS-420 will continue to track US-IFPP action and report on publication of new guidance memo. **Item Open: AFS-420 (US-IFPP)**

Editor's note: Memorandum: RAPT criteria guidance for inclusion of instrument approach categories C & D on instrument procedures signed 12-04-2014. ()

MEETING 15-01: Tom Schneider, AFS-420, briefed a slide () provided by John Bordy, AFS-420, showing language going into Order 8260.3C. Lev Prichard, Allied Pilots Association, questioned RAPT actions on issue. Tom stated that the Airports Division has a problem with an airport having Cat C-D minimums that cannot support Cat C-D type aircraft. Michael Stromberg, Air Wisconsin, said he flies a Cat D aircraft at 53,000 lbs. Some airports are trying to limit Cat D aircraft because they do not want B747 aircraft operating there, not understanding this would include his aircraft also, thus eliminating their regional jet service. Michael added that to have an airport say they do not want Cat D service is a bad way to limit the type of aircraft operating there. If they want to limit a size aircraft, they need to say that. Tom said proposed guidance is in progress and this item is open at the US-IFPP, adding that work is being done on consolidated surfaces and that changing categories involves rulemaking. Lev inquired about what the airport operator's responsibility is with this. Rick Dunham, AFS-420, spoke about the RAPT process being a group effort from all concerned to work these issues for each airport. A group discussion followed on what an airport can support, i.e., weight and tail heights, infrastructure; runway safety areas, airport reference codes (ARCs), airport design, etc. There was discussion on how there needs to be separation between design standards and operating standards. Rick stated that airport categories were created 50+ years ago. There are ongoing discussions and the initial thought is to get the RAPT more involved in considering all capabilities at a given airport and matching these capabilities

to the aircraft that use the airport. Tom showed the December 4, 2014 memo issued by AFS-400 regarding approach category inclusion. Bruce McGray, AFS-410, suggested the FAA consider an outreach to regional carriers for more information. Tom advised there is guidance in Order 8260.3C pointing to the RAPT Order (8260.43), and that the RAPT Order is being revised to incorporate this guidance.

Status: Rick suggested keeping issue open pending publication of Order 8260.3C, update of Order 8260.43, and other related work being done regarding aircraft categories. **Item Open: AFS-420**

MEETING 15-02: Tom Schneider, AFS-420, briefed we are awaiting publication of FAA Order 8260.3C. In addition, FAA Order 8260.43 (RAPT order) is being reworked by AFS-460. John Bordy, AFS-420, added that an AFS-400 policy memo is out directing to provide CAT C & D minimums as much as possible, but need to consider the impact on airport owners/sponsors (i.e., Would adding CATC and/or D minima incur any costs for them?). Lev Prichard, APA, inquired what was changing. John said the memo was done in conjunction with FAA Airports (ARP), to tell everyone the FAA wants CAT C & D minimums published as much as possible, adding that the RAPT needs to bring all parties together in the process when procedures are being approved. There are process guidelines currently in FAA Order 8260.43 and since the order is under revision, changes must be anticipated. Bob Lamond, NBAA says he monitors all new procedures in the RAPT to ensure that if CAT C & D lines of minima are feasible, they are included, or challenge why they are not. The issue is when the airport *does not* want them and it is usually a perceived cost for infrastructure changes needed to support larger aircraft. He encourages all operators and organizations to participate in these RAPT discussions. Lev added it is operationally advantageous to have the higher minimums, and Bob agreed. Lev inquired if any consideration to adding one category higher if there is a circling approach. Tom said this had been talked about from operational, TERPS and airport standpoints, and all options are being considered. It appears that work on FAA Order 8260.43 is the best avenue, with the expanded guidance for when procedures are requested thru the IFP gateway and specified in the request. Lev inquired if an airport supports CAT C straight in, is there any reason CAT D circling would be restricted, and John thought not (infrastructure wise), just an extra evaluation for the circling. Tom added when CAT D is added, it would be interpreted that now CAT D aircraft can operate/land there. Bob said that is something the FAA needs to educate on and wishes the FAA airports division would emphasize to airport operators that these are two completely different issues. Rich and Bob will review any future changes to the Airport design Advisory Circular (for airport design and approach categories), to ensure when referencing approach categories a reference is made that a higher category may be required to support turbulence.

Status: **Item Open: AFS-420** (status of FAA Orders 8260.3C and 8260.43C).
